

AMERICAN ARTISAN and Hardware Record

Vol. 88. No. 9.

620 SOUTH MICHIGAN AVENUE, CHICAGO, AUGUST 30, 1924.

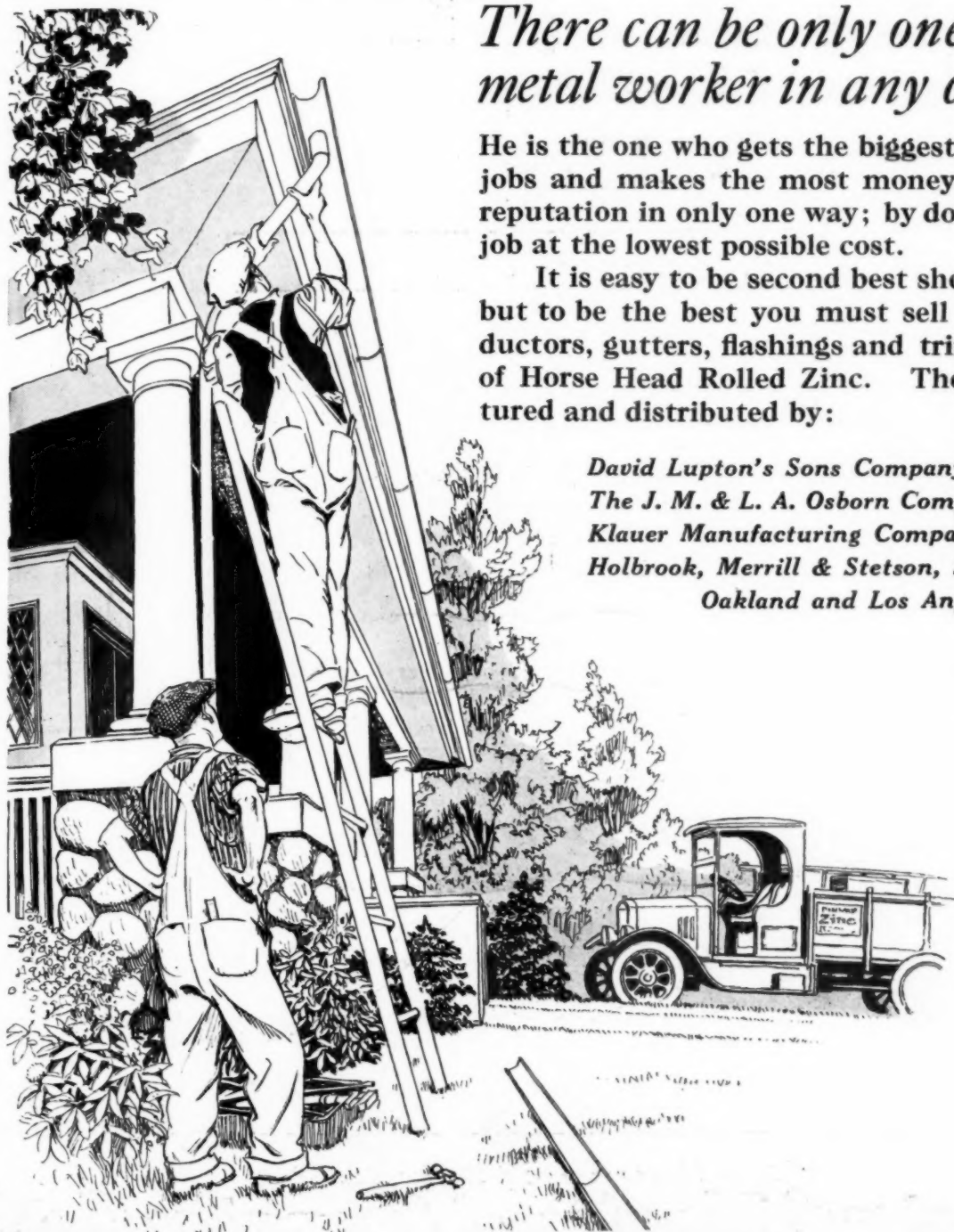
\$2.00 Per Year

There can be only one best sheet metal worker in any community

He is the one who gets the biggest and best paying jobs and makes the most money. He builds his reputation in only one way; by doing a permanent job at the lowest possible cost.

It is easy to be second best sheet metal worker, but to be the best you must sell and install conductors, gutters, flashings and trim that are made of Horse Head Rolled Zinc. They are manufactured and distributed by:

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The J. M. & L. A. Osborn Company, Cleveland, O.
Klauer Manufacturing Company, Dubuque, Iowa
Holbrook, Merrill & Stetson, San Francisco, Cal.
Oakland and Los Angeles, Cal.*



The New Jersey Zinc Company



Kwik-Lok

FURNACE PIPE AND FITTINGS



"The quality pipe of mechanical perfection"

YOU can't know the quality, strength, weight and construction of a make of furnace pipe until you get your hands on a section and give it a thorough examination. That's why we continually offer to send a sample section of Kwik-Lok. Kwik-Lok has numerous features of construction, but send for a list of them and a sample section instead of having us just tell you about them here. See for yourself why Kwik-Lok has become the Standard in furnace pipe.

A reminder to regular users

*Leading Jobbers throughout the country carry
complete stocks of Kwik-Lok Pipe and Fittings.
Order from your nearest jobber — or direct.*

"The House of Service"
THE Dunning Heating Supply Co.
131-133 REED STREET - - - MILWAUKEE, WISCONSIN

Founded 1880 by Daniel Stern

Published to Serve
the
Warm Air Furnace
Sheet Metal, Stove
and
Hardware Interests

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GIVE YOUR IDEAS PUBLICITY

MAKING MEN proud of their work never cuts production or diminishes quality. But constant drain of their sense of fulfillment does that very thing.

YOU HAVE ONE excellent way to make your superintendent or your foreman or one or a group of your workmen proud of their work. The way is this:

SUPPOSE in your organization there has been solved one of the constant problems that always accompany construction. The problem may be nothing more than some new way of placing a machine so that production is increased. Or the problem may have been the expeditious repair of equipment. One hundred and one thousand possibilities present themselves.

NOW IF YOU will write the occurrence in a letter to the editor of AMERICAN ARTISAN AND HARDWARE RECORD and send a picture if possible, the event can be given publicity. It will be interesting to other contractors and their forces, and it will create a spirit in your own organization that will help wonderfully in getting results.

ALPHABETICAL INDEX AND CLASSIFIED LIST OF ADVERTISERS, Pages 44-46-48.

Increase your Profits **by using** **Anaconda Economy Strip Copper**



*Straight and flat
as a board*

You can use Anaconda Economy Strip Copper at greater profit because:

- 1 It can be obtained in exact widths best suited to your needs. It comes flat as a board with straight and parallel edges. This eliminates waste and the cost of retrimming.
- 2 The American Brass Company produces Anaconda Economy Strip Copper in large quantity. Each process is standardized. This brings down production costs and means a saving on your stock investment.

If your jobber cannot supply your requirements, correspond with our nearest branch office.

THE AMERICAN BRASS COMPANY

GENERAL OFFICES: WATERBURY, CONNECTICUT

New York, Chicago
 Boston, Philadelphia, Providence
 Pittsburgh, Cleveland, Detroit
 Cincinnati, St. Louis, San Francisco



Mills and Factories:
 Ansonia, Conn., Torrington, Conn.
 Waterbury, Conn., Buffalo, N. Y.
 Hastings-on-Hudson, N.Y., Kenosha, Wis.

In Canada: ANACONDA AMERICAN BRASS LIMITED, NEW TORONTO, ONTARIO

What You Do or Do Not Do Determines Your Success or Failure.



NOT so many years ago a small concern was started in Michigan. Its business was one in which competition was—and is—especially keen.

Today that concern is worth many millions of dollars.

Other concerns, seeking business in the same lines and in the same territory and established with far better financial backing and under apparently far better conditions in other ways, have fallen by the wayside, while still others are no larger than they were at that time.

General conditions in the territory had nothing to do with these successes or failures.

In each case, it was a matter of what one man or one set of men did or failed to do.

But the truth of that statement is something that the average failure of the mediocre man hates to admit.

He is always trying to find an alibi for his failure or for his lack of success.

When all the time the reason for his failure or his lack of success is within himself.

In other words—he has no right to blame anybody but himself if he makes a failure out of himself.

And in making this statement we do not set up the money feature as a measure of success or failure.

However, when a man or concern has made a material success, it is always worth while to look into the factors by which that success was accomplished, and so we take from a recent advertisement of the concern referred to in the beginning of this editorial the following paragraphs:

"The majority of retail merchants rely entirely too much on what a period of general depression can do to them, or what a general wave of prosperity can do for them person-

ally, and they pay too little attention to what they can do individually to make their own business and general conditions better.

"Every week we read of retail failures in prosperous communities or of retail successes in districts where business as a whole is poor. This would seem to indicate that the merchant's greatest problem concerns himself, rather than that vague, indefinable bug-bear we call 'conditions.' When he learns to adapt himself to conditions, his problem will be well on the way to solution.

"There is always a certain amount of profitable business to be had in any community, regardless of whether times are good or bad. This business gravitates to the merchant who is prepared to handle it and who goes after it intelligently and vigorously. It is always on tap for the man who thinks clearly, plans constructively and puts his best effort behind his plans. It is foolish to expect that it will come in of its own accord and meekly surrender to the merchant who sits and waits.

"It therefore behooves every retail merchant to get the facts on his own trade territory, to ascertain the present and prospective buying power as well as the mental attitude of the people he does or can serve. This information should be augmented by a knowledge of general conditions and the economic reasons which govern them.

"The remainder is up to him, because periods of prosperity or adversity, general or local, will mean much or little to any merchant, according to the use he makes of them."

The same statement has been made in our editorials on numerous occasions—in almost the same words, and it was nothing new when we said it the first time, for it has held true from the day when the first business man made a truly successful trade—one that was of advantage to both parties.

Random Notes and Sketches.

By Sidney Arnold

S. F. Moncrief, the big brother of Dick Moncrief, lives down in Atlanta, and it was due to his earnestness and forcefulness that the 1925 National Convention of the Sheet Metal Contractors is to be held in his town.

Anyway, this same Mr. Moncrief hired a colored gent by name of Sam to do some work around the yard of his residence and gave him full directions as to what to do, before leaving for his office.

Arriving home about five o'clock he went to see what the roustabout had accomplished and noticed that there was still a lot to do, although the job ought really to have been done in one day.

"Is that all the work you can do in one day?" he asked.

"Well, boss," replied Sam, "I s'pose I could do mo', but I neber was much of a hand foh showin' off."

* * *

Some so-called salesmen remind me of that prince of salesmen, Don McMillan, because they are so different. They do not "know" their goods; they have no appreciation of the actual needs of their prospect, nor of his attitude toward the line or the house they misrepresent.

But they can talk and they surely talk themselves out of many an order.

I never heard of a fellow learning very much by doing all the talking. The average fellow wants to do all the talking and not the listening, because he does not want to learn very much, apparently. Polonius gives Laertes that advice. He says something else, which, of course, any salesman must have as a qualification.

Another of the faults of the modern salesman is the lack of confidence. We find that men and women, too, are self-conscious. They are timid and self-conscious, sometimes, and, of course, naturally,

those people do not get their message across because they are afraid. They are fearful; they are not possessed with real confidence in their proposition or in their particular merchandise.

Shakespeare gave us a wonderful idea of that away back yonder in his day when he said, "Doubts make us lose what we oft might win by fearing to attempt."

Shakespeare gives us a splendid line to think over when we have his suggestion to Laertes when he said, "Give every man thine ear, but few thy voice; take each man's censure, but reserve thy judgment."

* * *

"I wonder if you ever heard this one," wrote Harry Van Bayse, of the American Furnace Company, enclosing the following story:

An elderly spinster awoke in the middle of the night to find a burglar ransacking her effects. She did not scream, for she had always prided herself upon her courage. So, with a dramatic gesture she pointed to the door, exclaiming:

"Leave me at once!"

Whereupon the burglar, who had politely retreated a step, responded:

"Excuse me, lady, but I had no intention of taking you."

* * *

"The coöperation that some members of a trade give to the organization which works for their interests," said L. Y. McAnney, "remind me of the rich woman to whom a new acquaintance had made the following remark:

"Charity is a great thing. I suppose you have done a lot for the poor?"

"Yes; only yesterday I told James to drive our new car through the slums so all the poor people could see it."

* * *

R. S. Thompson, the "Vernois" furnace salesman, sent me the following clipping, which will be en-

joyed by every down-trodden sheet metal man:

Two Irishmen were watching a parade of Shriners.

"Who are those fellows, Mike?"

"They're Shriners."

"And what are Shriners?"

"Why, they're masons."

"Sure and what the devil do they want now? They're gettin' \$18 a day."

* * *

Roy C. Walker, General Manager of the Meyer Furnace Company, has a new office boy. The last boy with whom he was associated resigned a few days ago because the business did not suit his peculiar temperament.

"How long have you been here?" asked Roy, when the small boy made known his intention to engage in a different vocation.

"Six months," replied the boy.

"And you don't like the furnace business?"

"Naw, it's no good and I tell you straight I'm sorry I've learned it."

* * *

James O'Donnell Bennett, who writes for the *Chicago Tribune*, had a story the other day about one of the presidential candidates and quoted the following poem at the close: If with pleasure you are viewing Any work a man is doing,

If with pleasure you are viewing
Tell him now.

Don't withhold your approbation
Till the preacher makes oration,
And he lies with snowy lilies
On his brow.

For, no difference how you shout it,
He won't really care about it;
He won't know how many teardrops
You have shed.

If you think some praise is due him,
Now's the time to slip it to him,
For he cannot read his tombstone
When he's dead.

I knew an old Presbyterian minister some years ago who expressed the same sentiment in this way: "If a friend of yours is sick send him flowers to cheer him up while he is alive. He won't enjoy them in his grave."

Providing Inner Casing, Making Air Space, Best Means of Effecting Perfect Furnace Insulation.

J. Worth, Chicago. Uses Mirror to Detect Obstructions to Draft in Furnace Chimney.

Written Especially for AMERICAN ARTISAN by J. Worth, Chicago.

IN THE August 25th issue, page 18, of AMERICAN ARTISAN, there appeared an inquiry from Clyde Hansen, of the Granite Lumber and Hardware Company, Salt Lake City, Utah, asking for the best method of insulating the outside casing of a pipe furnace, and also the best methods of determining definitely as to whether the castings of a furnace are leaking smoke.

J. Worth, Chicago, has submitted a very comprehensive article, in which he says the only way to obtain a perfect furnace insulation is to provide an air space by means of an inner casing.

He also has a simple method of determining the smoke-tight condition of the castings.

Mr. Worth's letter follows:

TO AMERICAN ARTISAN:

In answer to the question asked by Clyde Hansen, Granite Lumber and Hardware Company, Salt Lake City, appearing in AMERICAN ARTISAN of August 23rd, page 18, under the heading: "What Is the Best Method of Insulating the Outside Casing of a Pipe Furnace?" I submit the following solution:

There is only one good method of insulating a warm air furnace and one that has given very good results in the past. That method is to put an inner casing on the furnace and to keep this lining one inch or so away from the outer casing, in order to allow air to circulate between them.

There are several ways of doing this, and I shall try to explain them as we go along. A very good method and one which is now in general use is to corrugate the inner lining. This is then set on the lugs of the lower casing rings or bolted to the outer casing.

Another way is to use the plain sheets of tin, covering one side with asbestos paper, and installing this so

that it sets on the lugs of the lower casing ring. The usual way of constructing this casing is to turn a 1/2-inch edge along the edges of the sheets of tin. The asbestos paper is then laid in and edges hammered flat with a mallet; this helps to hold the paper in place, and also produces a finished edge. This casing should be installed with the bright side towards the heat, so as to produce the greatest heat reflection. Care must be exercised to leave a space of about one inch between it and the outer casing, for air to circulate between the two.

Another way of installing inner casings and practiced to some extent by furnace men is to install a casing of flat sheets locked together and laid in tight against the outer casing. This method is no good for insulating purposes and may as well be left out altogether, for all the service it renders. No matter what type of insulation is used, there should be an air space between the two casings. Pasting asbestos paper on the outside casing of a furnace does not produce any beneficial results as far as insulation is concerned and might better be dispensed with, as recent tests at the University of Illinois have proved.

Although paper alone does not produce good results, a good air cell covering is satisfactory and is coming more into general use. However, if an inner casing is installed, as explained in the beginning, there is no need of reverting to any other methods. From the point of cost of erection and results obtained the first method has been found very satisfactory. I have held my hand against the outer casing of furnace so insulated when it was fired to a capacity and there wasn't the slightest tendency to burn, in fact, the casing was just warm.

Referring to the castings leaking

smoke, I have found this possible where the cement has fallen out of the joints, which condition, coupled with a poor draft, would make a poor installation still worse.

It is very hard to answer this question satisfactorily, however, as there are no sketches showing the location of the building or chimney. However, if the hood of the furnace is taken off and the castings and joints are examined, all leaks should be readily discovered.

In order to test the chimney for obstructions, I have found that a small hand mirror answers the purpose satisfactorily. The smoke pipe is taken off the chimney where there is no cleanout door. The mirror is put in the opening face up and if the chimney is clear it will show in the mirror. To test the chimney for leaks, a good plan is to shut up all openings tight, then start a fire of old rags or newspapers in the bottom. The smoke seeking an outlet will be seen coming out of all cracks and crevices; with their location thus determined, these can be repaired. It may be that the fault is somewhere else, however, but as there are no sketches explaining the location of the building or chimney construction, it is very difficult to give a satisfactory answer.

However, any of the methods explained are satisfactory and have been tried for many years.

Yours very truly,

J. WORTH.

Chicago, Illinois.

Intelligent Resistance Is a Prime Requisite in Selling Warm Air Furnaces.

A reading of the biographies of our great men and also those of the great men of the old world brings out the fact that these men became great because they had mastered the rudiments of salesmanship.

A story is current about the method Lord Northcliffe used to get into the good graces of Cecil Rhodes.

Lord Northcliffe had tried every possible method of getting a chance to interview Cecil Rhodes, but all to no avail. Finally opportunity

presented itself in a rather unusual and unexpected manner. Northcliffe had succeeded in getting into the Rhodes living quarters. He was walking around when he suddenly came upon Rhodes in the bath tub trying to wash his back. Quick as a flash he grasped the opportunity not to help Rhodes wash himself, but to explain to him that there was on the market a curved-handled brush which was excellent for that purpose. This won for Northcliffe the friendship of Rhodes and from then on he had no further difficulty in interviewing the then illustrious Rhodes.

This is resourcefulness to a high degree and persistency pushed to extremes, but it got what Northcliffe was after.

Intelligent persistence coupled with resourcefulness will accomplish the object sought. Obstacles in the way of a man of Lord Northcliffe's stamp are only stepping stones to something better. So, too, they should be to the salesman of warm air furnaces.

If the salesman does not possess tact; if his blunders are constantly getting him into tight corners, he should take the trouble to develop tact.

A. P. Kratz Surveys Performance of Warm Air Furnace With Anthracite and Bituminous.

Tests Supplementary to Those Reported on Warm Air Furnace Research at University of Illinois.

SOME remarkable facts were established with regard to the performance of a warm air furnace with anthracite and bituminous coal recently at the University of Illinois. The experiments were conducted by Professor A. P. Kratz, who reported the results at the semi-annual meeting of the American Society at Kansas City June 10 to 12.

The tests reported by Professor Kratz were supplementary to those previously reported in connection with the warm air furnace heating research work at the Engineering Experiment Station of the University of Illinois. The same general arrangement of testing equipment was used, consisting, in this particular case, of a cast iron circular-radiator type of warm air furnace erected under a three-story steel structure in the Mechanical Engineering Laboratory. This structure served as the working skeleton of a house, and carried the stacks and registers for the various floors. A two-piece unslotted pot was used for all tests on anthracite coal, and a one-piece slotted pot for the tests on bituminous coal. For one of these tests the slots were sealed with fire-clay.

Two objects were sought in the

tests, one, to compare the performance of the same furnace operating with anthracite and bituminous coal, and, second, to determine the effect of the use of a slotted firepot on the operation with bituminous coal.

Performance curves for the furnace fired with two types of coal indicate that:

1—Within practical combustion rates the anthracite coal gave higher efficiency and capacity (based on rise in the temperature of the air from inlet to bonnet) than the bituminous coal for the same combustion rate. At combustion rates that are excessive for warm air furnace practice, however, the reverse was true.

2—In the case of the bituminous coal, the efficiency was more nearly constant over the whole range of combustion rates than it was for the anthracite coal.

3—At a given combustion rate, more draft between the ashpit and outlet was required to operate the furnace on anthracite coal than on bituminous coal.

4—With bituminous coal, as fired under the conditions of the tests, the slotted firepot gave about 9 per cent greater efficiency and capacity than the firepot with the slots sealed.

An interesting fact brought out in connection with the temperature of the heating surfaces was that the firepot temperatures increase with an increase in combustion rate for anthracite coal, while the reverse is true for bituminous coal. This decrease in temperature indicates that the higher drafts required to produce the higher combustion rates cause an increase in the amount of air drawn through the slots, and result in cooling the firepot. The temperature of the firepot was uniformly lower for the bituminous coal than for the anthracite coal. The firepot temperature was also materially lower for the slotted firepot than for the one with the slots sealed. Accumulations of soot in the radiator in the bituminous coal tests amounted to about 1½ pounds at low combustion rates and were negligible at high rates.

The discussion brought out the fact that no firing period had been established for warm air furnaces as yet. H. M. Hart suggested that curves be developed for warm air furnace performance at various efficiencies. The question of furnace temperatures was also discussed, especially when burning fuel oil. Mr. Campbell stated that he had found 1,200 degrees F. to be the limit.

Bringing Out Health and Economy Features of Moncrief Furnace.

Advertisers of warm air furnaces and installations have gone a long way toward perfecting their copy. The general run of these advertisements seen in local papers have much to commend them.

There is, however, some discrepancy between the warm air furnace advertisements and others which appear in the same papers and perhaps on the same pages.

One of the precautions an advertiser should exercise if he hopes to obtain a good return on his advertisement is to see that his copy is not "snowed under" or surrounded by other advertisements that detract attention from it. This, of course,

is only possible by giving the ad sufficient individuality to make it stand out by itself.

In the advertisement of Moncrief

is rather difficult. It is suggested that an active headline be substituted for the one now appearing. The health and economy features

"If we install such plants, we need not fear the hot water or steam man as a competitor.

"In closing, for the benefit of our president, our secretary, our director, and for you in particular, I will strike a keynote which may be A major or it may B flat.

"I suggest that at every state and district convention henceforth, there be a school of instruction for the benefit of those who would be interested in high grade warm air heating; this would be an incentive to attend conventions for what they would get out of them when nothing else would be an inducement.

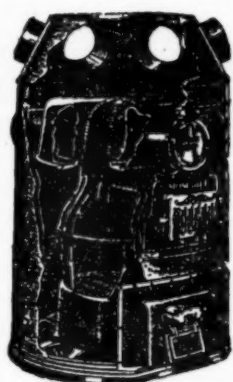
"Take this home with you and give it serious thought. Let your secretary know what you think of it, so plans can be laid for future conventions. If you do not think favorably, say so. If you do, say so, and don't consider my feelings in your decision."

Postmaster General New Says Proposed Increases in Parcel Post Rates Would Be Fatal.

An item recently appearing in the daily press, furnished by the *New York Herald-Tribune's* Washington correspondent, quotes an emphatic declaration by Postmaster General New regarding the proposed legislation which is now confronting Congress, dealing with the matter of increased postal rates.

At a conference with President Coolidge and General Lord, Director of the budget, the postmaster general declared that the proposal in Congress to get \$100,000,000 additional from parcel post receipts to finance the increase would destroy entirely the parcel post service.

"There must be a readjustment all along the line," said Mr. New, "if the postal employees are to be granted the proposed increases, which would aggregate from \$125,000,000 to \$150,000,000 a year. We are asked to pay for this by increasing parcel post rates to yield at least \$100,000. That is impossible. It would absolutely destroy the service. Some readjustments must be made, but it will be absolutely necessary to distribute the burden."



MONCRIEF FURNACES

are equipped with a water pan, supplying air of proper humidity. Moist air is more healthful and saves coal.

Phone for our catalog

MONCRIEF FURNACES

The Henry Furnace & Fdy. Co.

37 1/2 South Madison Street.

1778-J

How Henry Furnace and Foundry Company Push Moncrief.

furnaces, which appeared in the *Battle Creek, Michigan, News*, has some room for improvement, although in small advertisements this

could be rearranged in such a way as to make them mean a great deal more to the reader than they now do.

R. L. Spellerberg Tells How He Sells High Grade Warm Air Furnaces in Dubuque, Iowa.

Installer Makes Distinction Between Selling a Furnace and Selling Heating Service.

AT THE recent district conference held by the Iowa Sheet Metal Contractors' Association in Dubuque, R. L. Spellerberg spoke as follows on "Selling High Grade Warm Air Heating Plants":

"When talking about high grade warm air heating, there is much to be said, more really than a man can say in the time allotted.

"The most essential point in high grade warm air heating is to know a furnace of quality when you see one. This furnace should have the greatest radiating surface, longest fire travel and be of good weight.

"Next, to be able to plan, figure and execute a system of heating that will warm the home from stem to stern in most extreme weather.

"Another good point is to be able to demonstrate by careful firing that the home can be economically warmed, and carefully impart these instructions to your patrons. An adequate plant should be able to warm the home while the front draft remains closed, provided, of course,

that you have a reasonably good chimney. This spells economy.

"You should remember when selecting a furnace which you desire to place in the homes of your friends and patrons, that quality means more than dollars and cents.

"You should remember that when a manufacturer offers you something for less, you are certain to receive less.

"You should remember that if anyone offers to install a plant for less than your figure, he will give less.

"You should remember to plan and talk quality first and price last.

"You should remember that price does not give quality; it only gives ownership. Hence, service and not the selling price is the logical standard by which to judge value.

"You should remember that the first cost is nominal, compared with the annual consumption of fuel.

"You should remember to sell the plant that won't come back to the man.

Hero Furnace Installer Pushes Warm Air Heating System With Good Grace.

Some Room for Improvement Still in His Method of Presenting System to His Public.

THE warm air furnace, we believe, has merit enough in itself to warrant its being given the best advertising possible. The furnace itself and its accessories are productive of comfort and convenience in

the dwelling house of the first magnitude.

In our advertising, then, why not make these products known to our prospective customers? A greater appeal can be made by telling a man

or woman how their houses will be made comfortable during cold, inclement weather than by trying to sell the furnace as so many pounds of castings and air ducts.

There are four distinct appeals which the furnace man can use in making his appeal. Their relative importance will depend upon the individual. They are: Healthfulness, economy, dependability and cleanliness.

With these four appeals it seems to us any furnace man can build an advertisement of exceptional pulling power. These are the fundamentals upon which any advertising campaign offering warm air furnaces must be based if it is to succeed. The matter of guarantees or double guarantees is only one of the bars which can be used in case the necessity of further bolstering is seen.

This being the case, why not dwell upon these fundamentals in our advertising of warm air furnaces? Why not sell a warm air heating system and its installation to our patrons. Then, if these are properly installed in accordance with the specifications of the national warm air furnace code, we won't have to be worried about giving a guarantee if called upon. The system will itself be the guarantee which we will never be called upon to protect.

Advertising of the sort mentioned heretofore cannot help but be productive of good results, not only in immediate business for the installer and manufacturer, but for the entire industry.

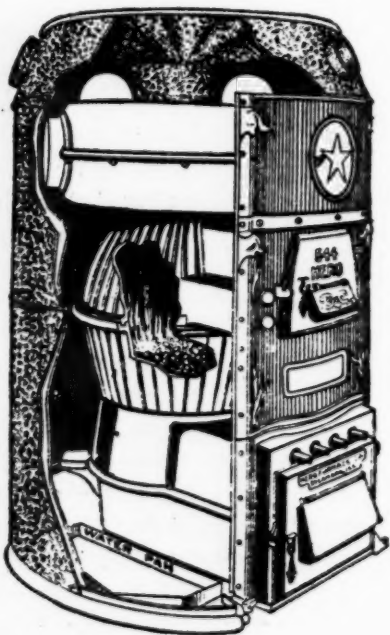
The advertisement shown has gone a long ways on the right road to perfection, but there is still much room for improvement.

Do People Prefer to Have You Serve Them When Buying?

Personal magnetism is one of the important qualifications of the salesman. Without it his sales ability is seriously impaired. He must be capable of drawing people to him, of making them prefer that he serve them instead of some one else.

As Cheerful as the Sunshine--- HERO Air-Washed HEAT

Distributed to every corner of your home makes every room comfortable, banishes cold drafts, improves the health of your family. Thousands of homes today enjoy this blessing through the



HERO Air-Washer Furnace

Double Guarantee

Guaranteed by both
the local dealer
and the manufacturer

Estimates cheerfully given. Service, quality, workmanship and efficiency guaranteed. Cash or installment plan. Call or write

Paddock, Kenyon & Montgomery
Phone 79 114 West State Street
or **HERO FURNACE CO.**
Phone 664 SYCAMORE, ILL.

Wisconsin Sheet Metal Contractors and Salesmen Hold Outing Near Milwaukee.

Ball Games, Contests of Strength, Skill and Endurance, Made Fine Start for Fine Dinner.

THURSDAY morning, August 21st, did not promise well for the annual outing of the Milwaukee sheet metal contractors. The sky was cloudy and a cool breeze was blowing, but the committee set out early for Mequon, about fifteen miles to the north, and at 10 o'clock had everything in shape; there was rye bread, cheese, sausage, ox tongue, barreled goods and bottled pop, cigars, baseballs, quoits and all the other things that go to make an outing a success—and then the sun came out and Louis Eschenburg, Bill Hamann and Rinie Jeske were happy, for they saw that their labors would not be in vain.

Soon the auto horns were heard and by noon about sixty Milwaukeeans and contractors and salesmen from other Wisconsin cities and Chicago had gathered.

Among the out-of-town guests were Arthur Stremel, one of the big sheet metal contractors from Minneapolis. A large delegation drove over from Madison; Waukesha, Sheboygan, Fond du Lac and other Wisconsin cities were also represented, so it was really a "state outing," and Secretary Kelm was happy.

Everything went off in fine shape. The salesmen battled with the contractors in a game of baseball, but

there was no official scorekeeper, so we shall not attempt to say which team won. Art Matsen filled the position of umpire, both literally and physically in fine shape; his badge of authority and distinction was a German comedian's hat which fitted beautifully on his ears.

The Homer Harmony Hummers drove over from Coldwater, Michigan—that is, they drove to whatever town across the lake, they were able to take the boat for Milwaukee. Note the nifty "knickers" they wore (see picture), somebody was unkind enough to soil the pure white linen ones that Ralph Strong was wearing. Bruce Strong found the mosquitoes liked his calves so well that he borrowed a pair of overalls to save himself from being devoured alive. "Ros," of course, led the singing.

Then there were feats of strength and endurance; John Millen and Joe



1.—Louis Eschenburg Admiring His Double. 2.—A. J. Bohle, Ellsworth Dunning and Larry Elmer. 3.—Joe Hollitz Has the Knee Grip on John Millen. 4.—Ralph Blanchard, H. L. Jackson, H. C. Barrager and Glenn Holford. 5.—Bill Hamann, Louis Eschenburg and R. Jeske. 6.—Paul Biersach and Arthur Stremel. 7.—Art Matsen and A. G. Pomrening; Bruce Strong Took the Part of the Bulldog in the Lower Part of Picture. 8.—The Homer Harmony Hummers: Bruce Strong, Ros Strong, Maurice Payne and Ralph Strong. 9.—Our Official Photographer, John W. Bogenberger. 10.—C. F. Tolg, Waukesha; H. R. Geussenhainer, Sheboygan; State Secretary R. E. Kelm and City Secretary T. E. Tonnsen, Milwaukee.

Hollitz pulled their annual wrestling exhibition. Ellsworth Dunning and "Ros" Strong had a pole pulling contest, but there was no decision, as the walking stick (the property of AMERICAN ARTISAN reporter), which served as a pole, broke in the middle and the two contestants bumped their heads against the ground; result a lump on each one.

Ralph Blanchard claimed that he did not know anything about quoits, but after his easy victory there were some who claimed that the truth was not in him.

The Pritzlaff team of good fellows was there, of course. Sheet metal men in Milwaukee could not have a good time without A. J. Kilian and Ben Boelke.

John Bogenberger was under the weather, but the "Consolidated" was well represented by Paul Biersach, John W. and Walter Bogenberger. John W. acted as the official photographer. Blame him if your picture was not taken.

Last, but not least, there was the dinner-sauerbraten, roast pork, pickles, potatoes, rich gravy, peas that you could eat with your knife, rye bread, coffee, pie and GiltEdge cigars.

Purdue Engineering Experiment Station Prepares Treatise on Sheath Corrosion.

The engineering experiment station of Purdue University, Lafayette, Indiana, has embodied in its July Bulletin a very instructive treatise on "Self Corrosion of Lead Cable Sheath," prepared by F. O. Anderegg, assistant professor of chemistry, and R. V. Achatz, associate professor of telephone engineering.

The work contains a report of many experiments with various wire coverings and their actions when placed in contact with the soil, concrete and gravel.

emphatically that a goodly portion of the contemplated advertising campaign be given over to securing the widest possible publicity on galvanizing standards that have the entire approbation of the American Zinc Institute. As a matter of fact, in the galvanizing industry alone, it would be possible to increase the consumption of zinc by 50 per cent if galvanizing standards were raised to a point that equals that of foreign galvanizing; if only the same tonnage of galvanized material was marketed, but we all must recognize that raising the quality will automatically raise the tonnage also. At least, this has heretofore been the result obtained, and we believe galvanized products will prove no exception to the rule.

Your committee's research shows that the general average of galvanizing produced in this country contains 1.25 ounces to the square foot, and that the foreign average is approximately 2.5. On the basis that 60 per cent of the entire zinc output in this country is consumed in galvanizing, it would mean that approximately 400,000 additional tons would be consumed in galvanizing alone should American Zinc Institute standards be maintained.

It only remains, therefore, for the general public of the United States to realize that galvanized products are worthy of their consideration to secure this immediate increase, which, in itself, should justify the appropriation your committee feels is necessary for the successful promotion of this work.

Your committee calls attention to the several instances where important manufacturing enterprises are seeking additional business on the basis of the increased zinc content of their products. Your committee submits the general advertising that is being done by the American Steel and Wire Company and the Cyclone Fence Company in establishing this fact. I might add that this week's *Saturday Evening Post* also carries a pertinent advertisement of the American Rolling Mill Company.

Your committee feels that it is unnecessary to impress upon you the

One Hundred Thousand Dollars Is to Be Collected and Spent for Zinc Advertising.

American Zinc Institute Takes Steps to Popularize Zinc and Zinced Metals.

AN ADVERTISING campaign is to be conducted by the American Zinc Institute, according to "ZN," the organization publication of the association of zinc producers, smelters and converters, known under that name.

The raising of a \$100,000 fund for this campaign is now in progress, the money to be spent according to the plan formulated by the publicity committee, headed by E. S. Gellatly, formerly general sales manager of the Illinois Zinc Company.

Mr. Gellatly made the following report to the annual meeting recently held in St. Louis.

Report of Publicity Committee.

Your publicity committee, during the past twelve months, has given generously of its time in the promotion of the details of the advertising, publicity and merchandising

campaign that was presented to, and acted favorably upon by, the membership in annual meeting assembled last year.

The committee's plan, as presented at that time, contemplates an educational campaign upon the uses and merits of zinc, generally.

In addition to these points, your committee gave careful study to the question of galvanizing and has arrived unanimously at the fact that if galvanized products are to receive the consideration due them, a higher standard of galvanizing must be maintained.

Investigation disclosed the fact that galvanized metal, for the past few years, has been sold on price rather than on quality, and this has, in itself, worked great harm to the entire industry.

It is the purpose of your committee, therefore, to recommend very

successful results that have already been obtained by similar associational work both within and without the metal industry. Your committee is confident that the board of directors, and, indeed, the entire membership of the institute, is quite conversant with the successful results that have been obtained by the Copper and Brass Research Association in the interest of copper. Your committee will be very glad, indeed, to submit interesting data in connection with this campaign if any member is in doubt upon the fact.

It is, therefore, your committee's earnest suggestion that the board of directors, and, indeed, the entire membership, give immediate consideration to the question of the appropriation for the activities that have already been outlined. While \$100,000 was suggested as a figure for this purpose at the last annual meeting, your committee are emphatically in favor of raising this sum to approximately \$200,000, as the work that faces your committee contemplates not only farm paper, magazine and trade paper advertising, but the necessity for booklets, pamphlets and other literature, together with the possible necessity of newspaper advertising and publicity work that seems most expedient.

In closing, your committee suggests that, as a result of its efforts during the past year, the institute members look upon this question of exploitation from the viewpoint of its being a "national" issue rather than a "local" issue. Such a campaign as your committee has already presented needs the enthusiastic co-operation of the entire institute if it is to succeed to its greatest possibilities.

As an instance of the opportunities that your committee is confident the institute is disregarding, it might be well to say here that Monsieur St. Paul de Sincay, managing director of the Vieille Montagne Company, in a personal interview, when asked by your chairman what percentage of rolled zinc sheets went into roofing, answered, "Between 95 per cent and 96 per cent." Monsieur de Sincay was dumbfounded

when he was informed that at that time less than 1 per cent of American rolled zinc sheets went into roofing in America. This is being increased rapidly.

Your committee desires to state that the plans for the campaign as outlined are completed. The plan proposes to give as much care and attention to the matter of galvanizing in the coming campaign as will meet the situation that confronts the the present American galvanizing situation, while at the same time furthering the interests of zinc for all other purposes. This season of the year is ripe for the inauguration of this entire campaign from both its educational and additional sales viewpoint.

Here Is a Common-Sense Combined Crimping and Beading Machine.

Common-sense is the name for a new combination crimping and beading machine, just placed on the market by The Peck, Stow & Wilcox Company, Southington, Connecticut. It will fill a long-felt want for an inexpensive, very simple, yet greatly durable crimper that does not require any tricks to adjust. This machine is geared direct acting for speed and fitted and adjusted at the factory so that it is ready for use. It will crimp and bead black or galvanized pipe up to 24 gauge.

It was designed to meet every requirement of the large as well as the small sheet metal shop and as a desirable, inexpensive addition to the stove pipe department of the hardware store. The beading and crimping rolls are countersunk and are held to their arbors by screw nuts which leave the face of the rolls flush with their arbors. All rolls and gauge are of steel and scientifically hardened. A pair of steel blank collars accompany each machine and when these collars are

substituted for the beading rolls the same machine is instantly converted into a practical, plain cornice makers' crimper. The illustrations herewith show this machine as a combined crimping and beading machine and when required as a plain crimper.

The construction throughout is of steel excepting the cast iron frame and crank. All parts are made from the best materials, accurately machined and throughout it has the appearance to the trained eye of the good mechanic of costing a great deal more than asked. The large quantity production that the company has scheduled enables them to offer so high-grade a product for little money.

This crimper will be made up with spiral and straight crimping rolls. The user only has to state his preference, as there is no extra charge for either style of crimp. The company will be glad to send literature and



New Pexto Combined Crimping and Beading Machine.

give further information to anyone interested.

Real advertising will always increase sales.

Lawful coöperation among business men and useful business organizations in support of these principles of business conduct is commended.

Patterns for Construction of Sheet Metal Flat Bottom Duck-Hunting Boat Easily Made.

Main Idea Is to Select Suitable Length and Width and Make Remaining Lines Suit These Three Points.

Written Especially for AMERICAN ARTISAN by O. W. Kothe, Principal, St. Louis Technical Institute, St. Louis, Missouri.

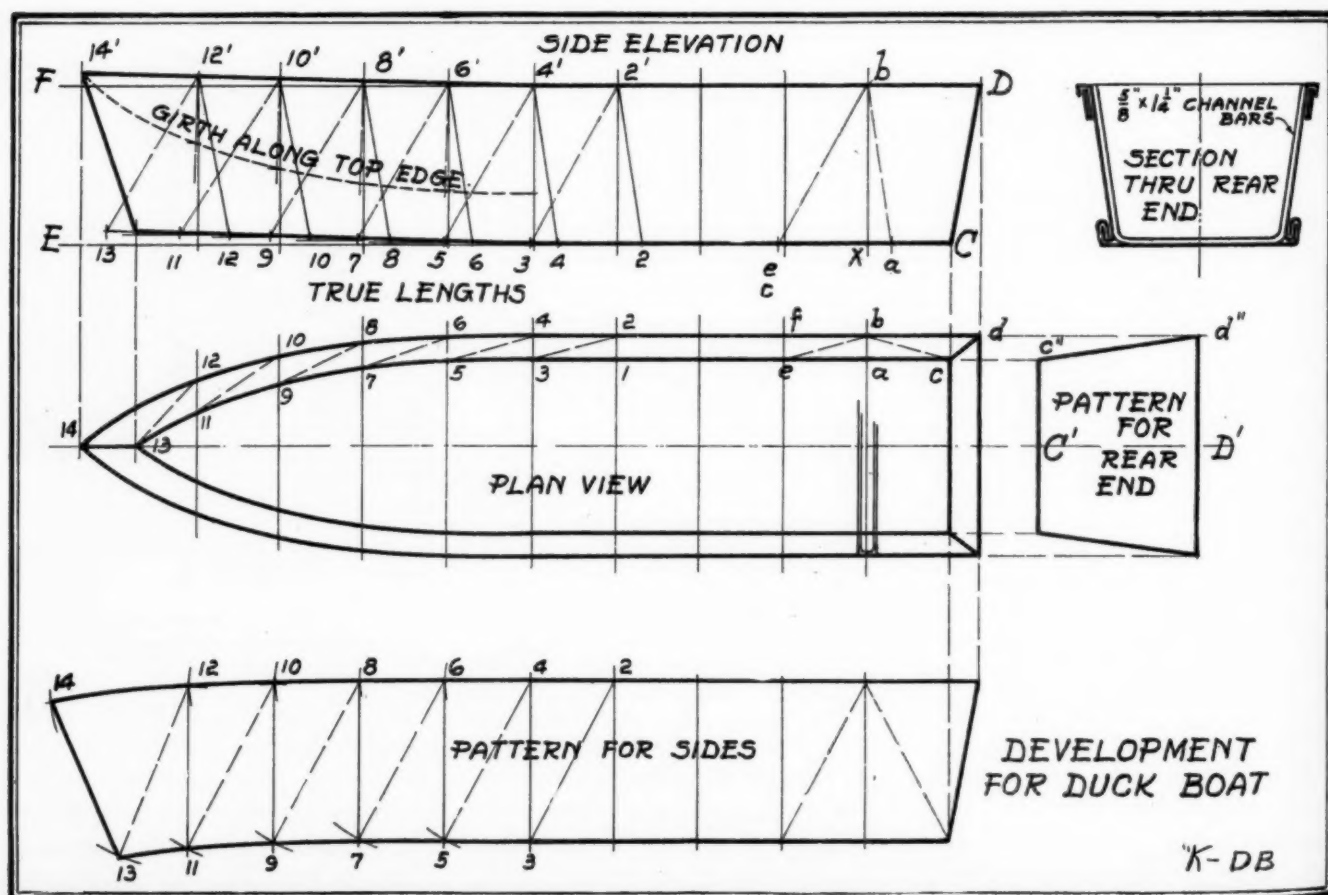
RESPONDING to the inquiry of J. J. Spohn, 742 Fulton Street, Grand Rapids, Michigan, for a flat bottom duck hunting boat, I have submitted a drawing which will help him in this construction. The idea is to select a suitable length for the boat and also a suitable width in about three different places, such as the center, the front and rear ends. The remaining lines are sketched in or drawn to suit these three points. Thus, the elevation is made to a specified height, possibly to about fourteen inches and the front end is raised from a horizontal line some distance so as to take the water better. The bottom can be made level, but the rise is preferable, as it divides and rises over the water better.

First draw the horizontal lines E-C and F-D to the height the boat is to have and then at the front end add the rise of the bow, making this at pleasure or possibly four to six inches in eight or ten feet. The rise starts at about the center of the boat or about point 3 of plan. Then the nose is either made curved as 3-13 and 4'-14' of elevation or straight as in this case, which makes a sort of kink in the center as at point 3. From these outlines we drop lines into the plan which gives the length and the flare of the front and the back.

Having the width of the plan decided on to correspond with the length of say sixteen feet, the width in the center can be some thirty inches to three feet, while the rear

end can be made from twenty-four to thirty inches and the front can be made to a peak. In this case, the rear half of boat is made straight of the same width, while the bow is curved and this can be done free handed sketching the lines as becomes your feeling of the curve desired. The same holds good with the top line, as b-2-14 of plan. The flare would be represented by the distance a-b, which, in this case, is parallel toward the back, and has a greater flare toward the front. But this is a matter of individual taste and the flare can be made greatest at both ends if desired, since the method of development is by triangulation and the patterns will work out anyway.

We next divide the bottom cen-



Pattern for Sheet Metal Duck Boat.

ter line of plan into any number of equal spaces or else we measure the distance the ribs are to be apart as possibly every 14, 16 or 18 inches. This produces the vertical lines which are drawn through the plan in elevation, and represents the frame work of the ribs. These points in the outline of the plan can be taken for the bases of triangles by simply drawing connecting lines as c-b-e, etc. Now to determine these true lengths, observe the elevation gives us altitude and so by picking the flare as a-b we set as x-a in elevation, the a-b of elevation will be the true length. The same holds true with plan line c-b, which is set as x-e, when e-b will be the true length of this line. As this part of the boat is parallel to 1-2 these two lines will answer the purpose for developing the rear sides. But as the front part flares each space must be developed separately and so the true lengths are picked as 1-2, 2-3, 3-4, 4-5, etc., of plan and set over from each vertical line of elevation. In this way the elevation produces the altitude and the plan produces the base so the slant line is our true length. Observe toward the front as the nose of boat rises upward, a perfect right angle is not produced with the vertical line and so a horizontal line must be squared out from the vertical line from which to locate the base line of plan triangles. In the same way as the top of the boat forms an incline and the plan forms a curve, the plan will not be a true girth for either the top or the bottom in this case; but the difference is so slight a developed girth can often be dispensed with by enlarging the space of plan a fraction of an inch. The true girth is developed by squaring out lines from each point as 4'-6'-8'-10'-12' of elevation and then measure the half diameter from center line of plan on these lines. This enables drawing the dotted line represented by the girth along the top edge.

The bottom of boat or the plan view already is a pattern with the exception of the front part which could stand lengthening a trifle so as

to make allowance for the rise. The side is developed by taking the height as a-b of true lengths and setting that as the height of the pattern for side and then drawing horizontal lines up to about 1-2 or 3-4 from which the rise takes place. The back part of boat will then have straight lines while the front will be developed to raise along an incline.

This is done by triangulation and any person who can lay out a taper joint or something like that should be able to develop this. Channel irons are often used as a means of reinforcing the sides to the bottom, such as the section through rear end shows. Other details can be built in as the boat progresses in its construction.

Wisconsin Sheet Metal Contractors' Association Starts Aggressive Campaign for New Members.

This Is in Addition to the Educational Work Which Is Now Being Done With Architects.

UPON several occasions mention has been made in AMERICAN ARTISAN of the aggressive work which is being done by the Sheet Metal Contractors' Association of Wisconsin, both to increase the membership and to add to the present use of sheet metal as a building material.

We publish herewith two letters—one to members requesting them to do their share in the membership campaign, and another to non-members:

Letter to Members.

DEAR FELLOW MEMBERS:

At the last meeting of the board of directors one of the most important subjects brought up was membership increase for our association. We are, therefore, starting a membership drive to bring in every worthwhile and legitimate sheet metal contractor in the state, and the advertising matter which we have already sent out will pave the way to quite an extent, and has cost considerable time and energy to prepare, yet this has been cheerfully done, and without compensation, and we will indeed feel well repaid for our effort if you will do your little bit and help the worthy cause along.

In the first place there are over three hundred sheet metal shops in Wisconsin who are not affiliated with this association, but ought to be. What are we going to do about it? Let George do it? That would be an easy way, in fact, this is just

what has been done in the past. No, I will tell you what we will do, we will sidestep our regular business routine a little and make it a point to get in touch with each sheet metal contractor in our respective neighborhood, and find out whether he belongs to this association or not, and, if not, explain to him that the better class of shops all belong to the association, and you will soon find that he will not wish to be classed with these scrubs.

We are enclosing a copy of the letter and two enclosures which have been sent to every sheet metal contractor in the state, please read it over carefully, and form an opinion, and see whether you think you can make good the password, "Every member get a new member for 1924." I know you can if you try, and there never was a better time than now, for after July 1st new members can join by paying only four dollars which is the last half of this year's dues.

Application blanks are enclosed, and the job ahead of us is to get those three hundred fellows into this association, and we know that they won't walk in by themselves, but might come in if invited by some nearby member, so don't throw this letter into the waste basket, but make up your mind to see your competitor who is still outside of this association, even if you have to go and see him after supper. Remember we are not going to bombard you with literature and keep on re-

minding you of the same thing over and over, as we haven't the time for that, so naturally we will expect you to start right in and dig 'em up. Just like if they were buried dollars. Your reward will come later in the form of better business conditions, and the one whom we fear the most, is the one who knows the least about the correct methods of doing business, for it is just those kind of fellows who set all low standards that no legitimate business could follow and still exist, and we feel that if these fellows would join our association, it would be much better for the whole community, for a man could not belong to this association, and say that he wasn't a better business man than before, unless he be dead from the shoulders up.

I therefore ask you again, get your new member for 1924 and if you do, I will guarantee that the rising sun of 1925 will shine upon the finest crop of sheet metal contractors that has ever been raised in the United States.

Now let's go.

P. S.—Good luck to you.

R. E. KELM,

Secretary.

Letter to Non-Members.

I would like to ask you a very simple question. Did you ever see a fellow poke his fist through a hornet's nest? If you have I can plainly see where some doctor got a job. If you haven't you will easily guess why. At any rate, what has this to do with hornets? Well, my friend, I am going to tell you, all hornets are organized, and everybody has great respect for them. On the other hand there are some sheet metal men today who are not organized, and who do not belong to the association of sheet metal contractors of the United States.

I do not mean that sheet metal men are hornets, but I do say this, "If hornets are organized, there is a reason," and that same reason applies to sheet metal contractors.

In looking over the list I find that your name is not there, so I am enclosing an application blank, and a few enclosures from our national secretary which I wish you would

read over carefully, it will give you a better idea as to why you should join.

If there is a local in your city you may join that, and you will automatically belong to the state and national association. If there is no local in your city, you may fill in the application blank and send it back together with your check for four dollars, for the last half of this year's dues, and you will then be admitted to the state association as an individual member, and automatically be a member of the national.

Immediately upon receipt of your application blank, together with remittance, you will receive a membership certificate which you may hang up in your shop, it will give you much greater prestige, when your customers come into your place of business and see that you are a member of the national association of sheet metal contractors, and best of all it only costs eight dollars per year.

I could sit down and write a whole page of benefits which you might receive by being a member, but for the present I think you will receive a fair idea by reading over the enclosures; however, I am at this time going to invite you to attend our local picnic which will be held some time in August. You will receive a notice later as to the exact date and place where it will be held, and we hope that you will be able to come. In the meantime just sit right down *now* and fill out that application blank, and mail it back at once.

Remember everybody respects a hornet's nest, just because it is organized.

R. E. KELM,

Secretary.

Sheet Metal Cornice and Educational Publicity Committees Meet at Sherman House, Chicago, Aug. 18.

Pursuant to a call, issued by Chairman George Harms of the Sheet Metal Cornice Committee, for a meeting of the members of the committee named and the Educa-

tional Committee, a joint meeting of these two committees was held at the Hotel Sherman at 10 a. m. on August 18th, 1924.

To the roll call the following members of these committees responded:

George Harms, Peoria, Illinois.

P. F. Branstedt, Washington, D. C.

H. C. Knisely, Chicago, Illinois.

J. C. Gardner, Indianapolis, Indiana.

Louis Luckhardt, Pittsburgh, Pennsylvania.

Paul L. Biersach, Milwaukee, Wisconsin.

Excuses were offered and accepted for non-appearance by:

W. A. Fingles, Baltimore, Maryland.

George Thesmacher, Cleveland, Ohio.

Chairman Harms opened the meeting by citing the objects of his calling this meeting of the two committees and then voiced his sentiments as to what should be done as to the

Rehabilitation of the Sheet Metal Cornice.

Chairman Brandstedt of the Trade Development Committee submitted quite a few drawings and stated what had been done under his supervision and this committee will take advantage of what has been accomplished by him and them.

He called for suggestions from those in attendance and after considerable discussion pro and con the following plan of campaign was adopted:

It was decided to prepare a booklet to contain from six to ten illustrations with text on sheet metal cornice, said booklet to have illustrations in size 9x12 inches, which is in conformity with those to be used by the Trade Development Committee in their book. The task was assigned to Mr. Brandstedt with the understanding that he submit the same at the ensuing meeting. Motions made to that effect were made by Louis Luckhardt and seconded by J. C. Gardner, unanimously carried.

The sentiments of all those present were that our chairman is to

write every local and state association, also individual members to submit a list of names of architects.

That booklets, when issued, are to be personally delivered to architects by the members.

That said members are to report back what the architects said.

Also request information where architects have specified sheet metal cornices.

Submit the plan to each local and state association showing what has been and will be done.

A discussion arose as to the feasibility of offering to the membership a prize of \$25 for the best thesis submitted by any member of our national association on the subject of "The Sheet Metal Cornice," said thesis to contain about from two hundred to three hundred words. The suggestion was accepted unanimously, and the Educational-Publicity Committee was requested to get this under way as soon as possible.

It was decided to lump sum the two appropriations of \$1,000 each, appropriated by the Washington convention for the work involved and to be done, expenses incurred by the Sheet Metal Cornice and Educational-Publicity committees in their endeavors..

There being no further business, motion was made and seconded to adjourn, adjournment followed at 12:00 m., but not until the hospitality of member H. C. Knisely, who invited the members for noon day luncheon, was accepted and which was appreciated with many thanks.

Another meeting will be necessary to complete the work and this will be called by the chairman when necessary.

**Gibb Instrument Company,
Bay City, Michigan, Appoints F. J.
DeLima Sales Agent in Canada.**

The Gibb Instrument Company, Bay City, Michigan, has appointed F. J. DeLima as agent for the sale of its line of electric welding and electric heating machines in the Dominion of Canada. Mr. DeLima's headquarters are in the Keefer Building, Montreal.

Albert Friedley, Prominent In Illinois Sheet Metal Circles Passes Away August 22nd.

**Vice-President of Friedley-Voshardt Company,
Chicago, Answers Final Summons at Age of 71.**

THE death of Albert Friedley, vice-president of Friedley-Voshardt Company, 763 Mather Street, Chicago, Illinois, was recorded August 22, 1924.

With the passing of Mr. Friedley, in his 71st year, the sheet metal and allied industries have suffered a

distinct loss, as by his kind heartedness and untiring energy he had won for himself a place of high esteem in the hearts of his friends and co-workers.

Mr. Friedley was born at Naperville, Illinois, in the year 1853. He resided for a time at Chillicothe,

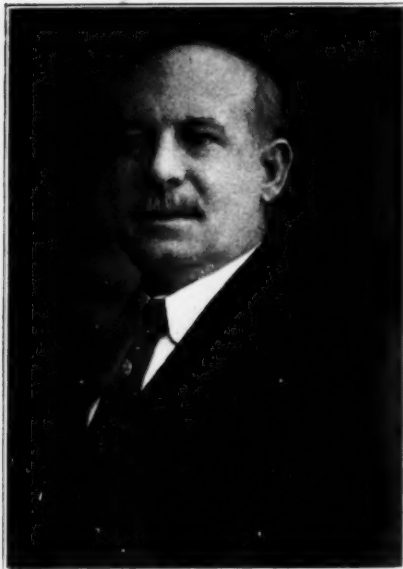


Hardware Store at Lemont, Illinois, Upon Which Albert Friedley Placed His First Sheet Metal Cornice in 1879 and Which He Made by Hand.

Missouri, and then at Lemont, Illinois, where his father had conducted a hardware store.

He came to Chicago in about 1875.

To show in some measure the extent of Mr. Friedley's knowledge of



Albert Friedley.

and interest in the industry, which he had made his life's work, and to show the thoroughness with which he worked, we bring to the attention of the readers the fact that as far back as 1879, when only a youngster of 26, Mr. Friedley made a sheet metal cornice by hand for his father's hardware store at Lemont, Illinois. So far as is known there have never been any repairs or renewals necessary on the cornice to date.

Mr. Friedley originally worked for Phillip Gormley. About 1882 he went to Rochester, New York, where he was employed by Goggin & Knowles. He then returned to Chicago and entered the employ of J. C. McFarland. While working for J. C. McFarland he had charge of the sheet metal work on the Texas state capitol building, and it was here that he met H. F. Voshardt.

In the year of 1888 he and Mr. Voshardt entered into partnership in the sheet metal stamping business at 763 Mather Street, Chicago. They had been associated in this business until the grim reaper intervened.

Mr. Friedley was fairly active in business up to the day of his death.

The funeral services were held from the spacious apartment of the deceased, where so many of his friends and business associates had gathered to pay their last respects that only about one-third of them could be accommodated inside, the remainder being obliged to stand in the street.

Indianapolis and Hoboken Win Prizes in Interchamber Fire Waste Contest.

The Chamber of Commerce of the United States has awarded the grand prize in the Interchamber Fire Waste Contest, conducted by the National Fire Waste Council, to the Hoboken, New Jersey, Chamber of Commerce. This was for cities of the second class.

Indianapolis, Indiana, won the first prize for cities of the first class, over 100,000.

For cities of the third class the prize went to Dubuque, Iowa; for cities of fourth class it went to Blytheville, Arkansas.

The awards were based upon fire losses and fire prevention measures.

For 1923 the city winning the grand prize showed a reduction in fire loss of 67 per cent, compared with the average for the preceding 5-year period. Interpolated into terms of dollars the reduction was from a loss of \$449,224 to \$157,040.

These figures indicate what can be done in the way of preventing loss of property, to say nothing of human life suffered, where energetic organized effort is instituted and systematically pursued.

These are matters in which every business man should take a lively interest.

Notes and Queries

Stoves of Phonograph Type.

From U. N. Roberts Company, Davenport, Iowa.

Please advise us who makes a heating stove similar to the Estate "Heatrola."

Ans.—Michigan Stove Company, Adair and Jefferson Streets, Detroit, Michigan; The Fox Furnace Com-

pany, Elyria, Ohio; Charles Smith, 6143 Wentworth Avenue, Chicago, Illinois, and Allen Manufacturing Company, Nashville, Tennessee.

"Kost" Gas Heater.

From Cobb-Whyte and Laemmer Company, 309 West Madison Street, Chicago, Illinois.

Who makes the "Kost" gas heater?

Ans.—Koher Die and Specialty Company, DeKalb, Illinois.

Address of Giblin and Company.

From Carl C. Lundberg, Box 372, Omaha, Nebraska.

Can you tell me where the Giblin Furnace Company is located?

Ans.—This firm is known as Giblin and Company, and is located in Utica, New York.

"Inter State" Furnace.

From C. S. Weatherly, 939 Cherry Street, S. E., Grand Rapids, Michigan.

Who carries the "Inter State" furnace?

Ans.—Carr Supply Company, 414 North Dearborn Street, Chicago.

"Majestic" Pipeless Furnace.

From Tyler and Pethel, Gallipolis, Ohio.

Will you please tell us who makes the "Majestic" pipeless furnace?

Ans.—Majestic Company, Huntington, Indiana.

Address of Charles Smith.

From M. Van Haaften, 917 South Rose Street, Kalamazoo, Michigan.

Can you give me the address of Charles Smith, at one time located at 63 West Lake Street, Chicago?

Ans.—6143 Wentworth Avenue, Chicago, Illinois.

"Apollo" Lawn Mower.

From Meier Brothers, Henry, Illinois.

Can you tell us who makes the "Apollo" lawn mower, as we need repairs for it?

Ans.—The Whitaker Manufacturing Company, 409 South Green Street, Chicago, Illinois.

"O. K." Combination Stock.

From Pacey and Daup, Papillion, Nebraska.

Kindly inform us who makes the "O. K." combination stock.

Ans.—Greenfield Tap and Die Corporation, Greenfield, Massachusetts, and 13 South Clinton Street, Chicago, Illinois.

It depends on you only as to whether 1924 will be a good year for you.

Drive the Nail A'right, Boys! With Perfect Tools, But Sell the Tools With a Perfect Window Display.

The Silhouette in Black Against a White Background Draws Attention to Small Carpenters' Tools Displayed.

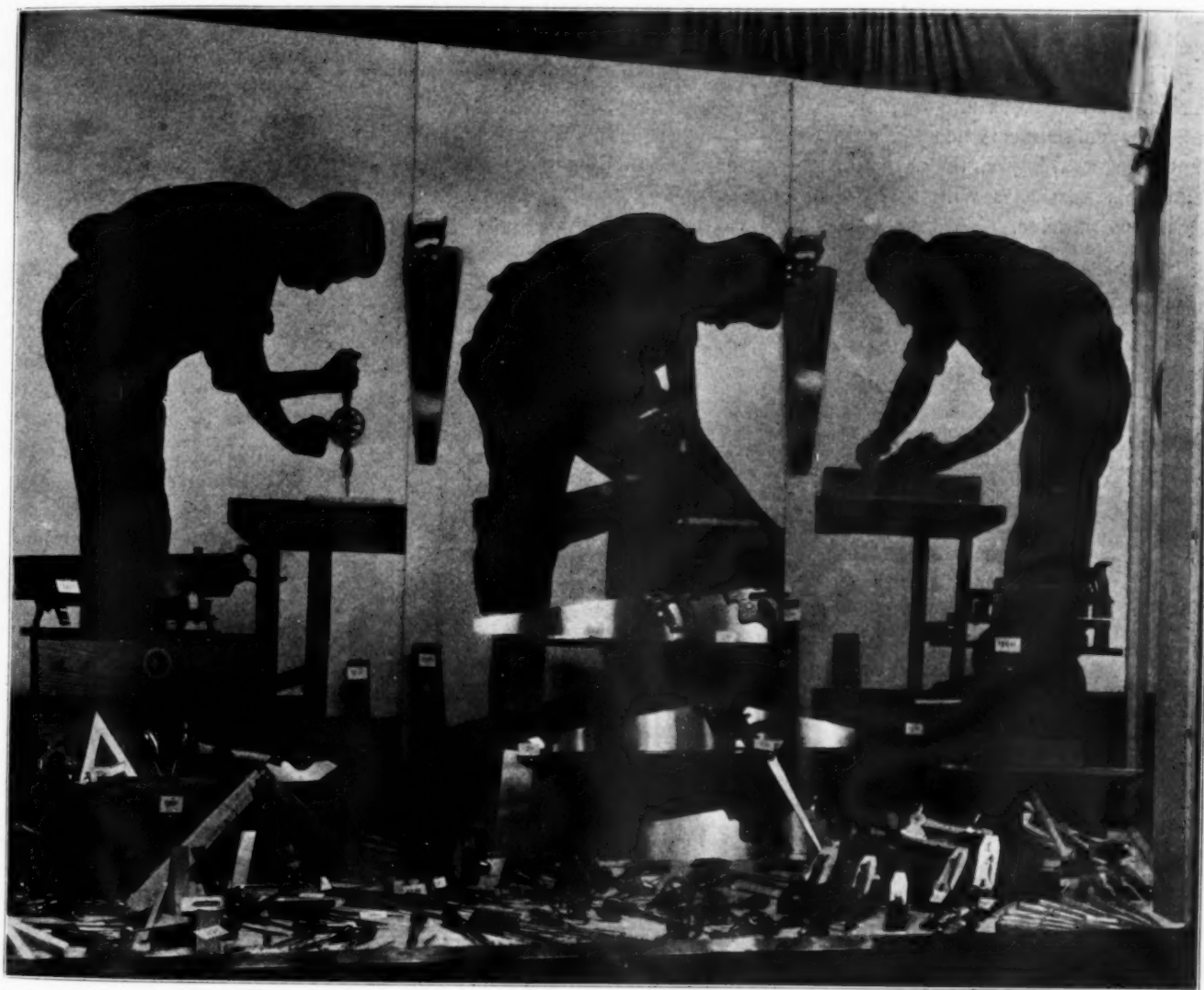
FEW hardware men today will dispute the efficacy of a window display to pull potential customers into the store.

However, the difficulty generally arises when the man assigned to the

can I make this one different from the last one?"

Howard C. Crabb got over this difficulty very effectually recently when, arranging a tool display for Belcher & Loomis Hardware Com-

pany. It consisted of three panels four feet wide. On each of the three panels was painted a silhouette of a man using a tool, the first using of a hand drill, the second a saw, and the third a plane.



Three "Carpenters" in Silhouette Make an Attention-Getting Window Display for Small Tools at Belcher & Loomis' Hardware Company, 83-91 Weybosset Street, Providence, Rhode Island.

job of decorating the window is called upon to make two or more displays of the same article in short succession. He gets by with the first one fairly successfully, but when confronted with the necessity of making the second or third, the question immediately arises: "How

pany, 89 to 91 Weybosset Street, Providence, Rhode Island, as is shown in the accompanying illustration.

This window he calls the tool window in black and white.

The background of the display was eight feet high and twelve feet

Upon the foreground was placed an assortment of small tools.

The arrangement of the silhouettes was exceptionally successful in attracting attention to the tools in the windows. It has the special feature of doing away with the ennui of windows of this type.

Courtesy in a Salesman Is Productive of Good Will and Brings Results.

Good Salesmen Keep Upper Hand by Leading Conversation Into Most Productive Channels.

CCOURTESY is not only a lubricant of retail merchandising; it is one of the fundamentals of the industry; it is the gyroscope which helps the industry to maintain its equilibrium and it provides a smooth planetary journal or bearing upon which the work-a-day world of business relations can rotate with ease and with the least possible friction.

It is very easy, indeed, for a sales clerk to be courteous and to maintain an even temper when the customer accepts things as they are and makes his purchases with as little trouble as possible. No science of the game or technique is demanded of the salesman under these circumstances. Here he is merely the page or valet who wraps up the parcel and makes change for the customer.

The test of the real salesman, however, comes when he encounters a man or woman who is hard to please. The sales clerk who maintains an even temper, a calm and dispassionate attitude in the most trying circumstances, has earned every right to the distinction of salesman par excellence.

It must not be inferred, however, that by a "calm and dispassionate attitude" we mean that the salesman should have nothing whatever to say to the customer. We do not mean that he should be a clam. This attitude will not be productive of results.

Many salesmen have a method of approach which is beyond reproach; they are enthusiastic and courteous until the customer begins to ply them with questions, after which they either close up entirely or make monosyllabic retorts which are anything but explanatory and only succeed in irritating the customer, often to such an extent that he or she leaves the store without making a purchase.

Many salesmen fail to appreciate the fact that when the customer be-

gins to ask questions a spark of interest has been generated and revealed, which, if properly fanned, can be brought to the point of sale. When answers to questions are not forthcoming the customer naturally assumes that the salesman has something to conceal and is, therefore, reluctant to make explanations.

The true salesman not only maintains a faultless deportment toward the customer, but he also makes it his business to lead the conversation in such a way that any possible questions which the customer may have are answered without loss of time. In this way the salesman keeps the upperhand and at the same time wins the confidence of his customer.

We have all met salesmen who antagonized us so that we could not set our minds to buy an object which we really wanted and had really intended to purchase when entering the store. We have also met salesmen who won our confidence immediately, thereby completely disarming us and very subtly breaking down sales resistance—the purpose of every true salesman.

Courtesy is just as important behind the counter as it is in society. Perhaps it is more so. Make it a cardinal principle.

Hamp Williams Defeated in Arkansas Primaries.

Hamp Williams, past president of the National Retail Hardware Association, was defeated in his campaign for the nomination of governor of the State of Arkansas. Immediately after the returns had been announced Mr. Williams issued the following statement:

"We fought a good, clean fight and lost. We have no regrets.

"I made the race as a business man on the principle that there should be more business and less politics in the affairs of the state government. I feel we have blazed

the trail in that respect and sincerely hope that in subsequent campaigns more business men will offer for office, and that success will crown their efforts.

"To my many thousands of loyal friends in the city of Hot Springs, Garland County and throughout Arkansas who worked and voted for me and believed in the principles which I advocated, I feel deeply grateful and I shall never forget their loyalty. I realize the fact that the people of Arkansas have spoken. I accept the result without the slightest ill feeling or animosity toward anyone, and as a good Democrat I will support the nominee."

Foreign Division Tariffs Issues Trade Information Bulletins on Advertising Matter.

The Bureau of Foreign and Domestic Commerce of the United States Department of Commerce, with offices at Washington, D. C., has issued trade information bulletins Nos. 122, 145, 250 on the customs treatment of samples and advertising matter in foreign areas.

The three copies issued give complete information on the shipment of samples and advertising matter to the British empire, to Europe and Latin-America and the West Indies, respectively.

The pamphlets treat exclusively with the status of the various advertising matter and samples in relation to the customs laws of the country of destination, as well as postal charges and the ultimate disposition of the parcels if for any reason it is found impossible to make delivery.

Gardner-Davis Hardware Takes Over Business of Wertz & Singer.

The Gardner-Davis Hardware Company, Middletown, Ohio, recently was formed to take over the business formerly conducted by Wertz & Singer. The change is scheduled to occur September 1. The new company has a capitalization of \$100,000.

Personal Liability May Stop Many Preventable Fires.

Many people still look upon all fires as being acts of God, not realizing that at least 75 to 85 per cent of them are clearly preventable by observance of common principles of safe conduct and the use of knowledge which is available to all. Nothing but a personal liability law could reach the man who carelessly tosses away a lighted match or cigaret, the man who sets a lighted lantern on the edge of an open tank containing a volatile liquid, the man or woman who fails to turn off the electric iron, the man or woman who exposes gasoline to sparks or fires, or the man who thought it was all right to strike a match over an open gasoline tank because it was a safety match. True, many of those who do such acts would have no property and would therefore be poor subjects for a damage suit, but if fire spread beyond the building in which they were working, their employers would be liable for their acts.

Coming Conventions

National Hardware Association Convention, Atlantic City, New Jersey, October 13, 14, 15, 16, 17, 1924. Hotel Headquarters, Marlborough-Blenheim. T. J. Fernley, Secretary-Treasurer, 505 Arch Street, Philadelphia.

American Hardware Manufacturers Association Convention, Atlantic City, New Jersey, October 14, 15, 16, 17, 1924. Hotel Headquarters, Marlborough-Blenheim. F. D. Mitchell, Secretary-Treasurer, 1819 Broadway, New York City.

Mid-Year Meeting of the National Warm Air Heating and Ventilating Association and Dedication of the Warm Air Heating Research Residence, Urbana, Illinois, December 2, 1924. Allen W. Williams, Secretary, Columbus, Ohio.

Kentucky Hardware and Implement Association Convention, Jefferson County Armory, Louisville, week of January 18, 1925. J. M. Stone, Secretary-Treasurer, 200 Republic Building, Louisville.

Western Retail Implement and Hardware Association Convention, Kansas City, Missouri, January 13, 14, 15, 1925. H. J. Hodge, Secretary, Abilene, Kansas.

Texas Hardware and Implement Association Convention, Dallas, Texas, January 20, 21, 22, 1925. Dan Scoates, Secretary-Treasurer, College Station.

West Virginia Hardware Association, Convention and Exhibition, Clarksburg, January 20 to 23, 1925. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

Indiana Sheet Metal Contractors' Association, Convention, Lafayette, February (dates not decided). Leslie W. Beach, 1136 Main Street, Richmond.

Oklahoma Hardware and Implement Association Convention, Masonic Temple, Oklahoma City, February 3, 4, 5, 1925. Charles L. Unger, Secretary-Treasurer, Oklahoma City.

Nebraska Retail Hardware Association Convention and Exhibition, Omaha, February 3, 4, 5, 6, 1925. Convention headquarters, Rome Hotel. Exhibition, City Auditorium. George H. Dietz, Secretary, 414-419 Little Building, Lincoln.

Wisconsin Retail Hardware Association Convention and Exhibition, Auditorium, Milwaukee, February 4, 5, 6, 1925. P. J. Jacobs, Secretary-Treasurer, Stevens Point.

Ohio Hardware Association, Convention and Exhibition, Columbus, February 10 to 13, 1925. James B. Carson, Secretary, 1001 Schwind Building, Dayton, Ohio.

New York State Retail Hardware Association Convention and Exposition, Buffalo, February 10, 11, 12, 13, 1925. Headquarters, Hotel Statler. Exposition at the Broadway Auditorium. John B. Foley, Secretary, City Bank Building, Syracuse.

North Dakota Retail Hardware Association Convention (place not yet selected), February 11, 12, 13, 1925. C. N. Barnes, Secretary, Grand Forks.

Montana Implement and Hardware Association Convention, Helena, February 13, 14, 1925. A. C. Talmage, Secretary-Treasurer, Bozeman.

Pennsylvania and Atlantic Seaboard Hardware Association Convention and Exhibition, February 16 to 20, 1925, at Philadelphia Commercial Museum. Sharon E. Jones, Secretary, 604 Wesley Building, Philadelphia.

Minnesota Retail Hardware Association Convention, St. Paul Auditorium, St. Paul, February 17, 18, 19, 20, 1925. C. H. Casey, Secretary, Nicollet Avenue and Twenty-fourth Street, Minneapolis.

New England Hardware Dealers' Association Convention and Exhibition, Mechanics' Building, Boston, Massachusetts, February 23, 24, 25, 1925. George A. Fiel, Secretary, 10 High Street, Boston.

Michigan Retail Hardware Association Convention, Grand Rapids, February 24, 25, 26, 27, 1925. Hotel headquarters, Hotel Pantlind. A. J. Scott, Secretary, Marine City.

Southeastern Retail Hardware Association Convention and Exhibition, Birmingham, Alabama, May, 1925. Walter Harlan, Secretary-Treasurer, 701 Grand Theater Building, Atlanta, Georgia.

Arkansas Retail Hardware Association Convention, Little Rock, May, 1925. L. P. Biggs, Secretary, 815-816 Southern Trust Building, Little Rock.

National Retail Hardware Association, Philadelphia, June, 1925. H. P. Sheets, Secretary, Indianapolis.

National Association of Sheet Metal Contractors, Atlanta, Georgia, June, 1925. E. L. Seabrook, Secretary, 608 East Chestnut Street, Philadelphia, Pennsylvania.

Retail Hardware Doings

Arkansas.

A deal has been completed whereby Lindahl Hardware Company, Malvern, has purchased the stock of the Malvern

Hardware Company, and will take over the property on September 1.

Idaho.

Twin Falls Hardware Company, Twin Falls, has been incorporated with a capital stock of \$20,000, of which \$12,000 has been subscribed.

Illinois.

The Co-Operative Mercantile Company, Galesburg, have purchased the hardware store formerly owned by George H. Jones and Sons, have completely remodeled and decorated it, and have moved their entire stock to the new place.

The Vosburgh Hardware Company, Richmond, are selling out their complete hardware stock. It is thought that Frank Vosburgh will continue the business after September 1, and John Vosburgh will leave for his new work.

The hardware firm of Sullivan and Sons at Macomb has dissolved partnership, Neva Sullivan selling his interest in the business to his father, John A. Sullivan, and his brother, Reece.

D. M. Norris and Son have reopened their hardware store in their new building on East Court Street, Kankakee.

Iowa.

D. H. Moyer and Son have sold their hardware stock at Arlington to R. H. Lowe of Mt. Vernon.

Frank Sellman, who has been in the hardware business in Newton for fourteen years, has sold out to W. T. Peterson of Ames, who will take possession of the Sellman store September 10.

McCreary Brothers Hardware at 1406 Willis Avenue, have just completed an addition to their building of 750 square feet of floor space, in order to give them room for the carrying of a larger line of merchandise.

C. E. Miller of Hopkinton is selling out his hardware stock.

Minnesota.

Cullen and Agather have sold their hardware stock at Sauk Rapids to William Hohn.

Missouri.

H. G. Kuhn of Prairie Home has purchased the hardware stock of Ray Borgard.

Nebraska.

The Thomsen Hardware store has moved from the Degner Building, Norfolk, to the store room in the newly reconstructed Eagles Building.

North Dakota.

A large part of the hardware stock owned by W. E. Johnson has been destroyed by fire, believed to have started from lightning.

Oklahoma.

The Lobsiz Hardware Company of Perry will have a new store soon.

Pennsylvania.

Fred A. Whittaker, hardware dealer at 1204 Eighth Avenue, Altoona, is building an addition and remodeling his property at 1219 Eighth Avenue.

Tennessee.

Vance, Armstrong & Gilbert is the new name of the hardware company located at 416 Union Avenue, Knoxville, as the result of a reorganization. The firm has been known as the Davis, Armstrong, Gilbert Hardware Company. W. M. Davis has retired, selling his interest to Fred W. Vance, who has been connected with the hardware firm for the past year.

Stove Merchant Forces the Attention of Passers-by With Brilliantly Lighted Window.

Nocturnal Joyseekers and Strollers All Pay Due Respect to This Modern Charybdis.

ARE the retail stove merchants in the rural communities making the best possible use of the electric light for calling attention to their stove displays at night? We are inclined to believe that they are not. This neglect to take advantage of the electric light in illuminating the window display, we prefer to believe, is due to the fact that these merchants have not been able to keep in touch with the newer developments in window display lighting, rather than from indifference.

Chicken raisers have long since learned how to increase the number of eggs produced by their hens with a scientific use of electric lights. To have suggested such a thing to the chicken raiser of a few generations ago would have been a signal for that personage to call in a specialist to examine you for a weakness of the head. However, someone pulled that stunt and presto! it worked majestically.

Why should the same thing not work with humans? Not in the same way, of course, but everyone knows that a brilliantly lighted sign board attracts attention to places where the pedestrian would not think of looking otherwise.

In Chicago, for example, there is a store on one of the main thoroughfares with a very small window—in fact, it has just room enough in which to place an enameled range. The range stands there in the window easily visible during the daytime, but unless some effort were made to bring it to the attention of the public at night, no one would know it was there.

Here is where Mr. Edison's illustrious discovery comes into its own. As we said the stove is set into the window. Two bright, white lights are then placed in the upper outer corners of the window, equipped with reflectors which throw the light directly upon the stove. The

stove being white enameled reflects a great deal of the light, making a great brilliancy, which is highly augmented by the surrounding darkness. Every person who passes the window is attracted to it, with the result that the stove offered for sale is forced upon the attention of the passerby.

Advertising Is Compelled to Do More Than Convince.

That people acknowledge your goods to be the best does not mean they will buy.

They may say A's cooking range is the best stove, that B's heaters are the best, but something more than that is needed to make those same people buy.

"Keeping the name before the

public" is not enough. You must use advertising to stimulate want. It must persuade.

Cigarette advertising not only popularized brands, it also increased cigarette smoking. Fleischmann urges eating of more bread and profits by the increased sale of his yeast.

Your real competition very likely is the limited use of what you make. You must cause men and women to demand your product and thus make a market for more of your stoves.

Knowing what to do and how to do it is the most important thing in advertising. Experience is the only teacher, but many a wide awake retail stove merchant has learned by observation how to produce effective copy. This can be done only by first acquiring an intimate knowledge of the needs of the market he wishes to serve. Then use advertising copy to call people's attention to this need.

The accompanying advertisement was taken from the the *Bellaire*, Ohio, *Leader*.

GAS STOVES

for Cooking or Heating

When you think of a new gas stove for this winter, come in and see the complete line we have. Every style is here as well as coal and oil stoves for very purpose.

Parts and Repairs

We have a complete line of the little things you may need to connect up a stove or repair your old one.

Rubber Hose, Lead Stove Connections, Gas Fittings, Gas Valves, Gas Cocks, Hose Ends, Sheet Asbestos, Asbestos Wool, Asbestos Glue, Fire Pokers, Fire Shovels, Fire Place Grates, Nursery Fenders, Etc.

THIS IS YOUR STOVE STORE

McVay Hardware Co.

32nd and Union Sts.

Phone 749

Stove Advertisement Taken from Bellaire, Ohio, Leader.

Untruthful Advertising Copy Is a Detriment to Even a Going Business.

Above All Things See That Your Advertisements Represent Your Goods as They Are.

THE object of a bargain sale in merchandising hardware, as in anything else, is either to move out stock rapidly to make room for something else or it is used as an inducement to bring people into the store. The primary factor in any such advertisement is, of course, reduced price.

The accompanying advertisement reprinted from *Eldorado, Illinois, Journal*, is an excellent example of this type of ad. As plainly seen,

hand, the sale may be induced by a desire to stimulate trade on off days when people do not ordinarily come to town. In these cases the sale merely lasts the one day and is repeated at frequent intervals.

There is no definite way of determining from its appearance what purpose the ad shown was to serve—whether it was to move old stock or to stimulate trade—but it was either one or the other and it is well designed for its purpose.

taken from the *Alpha, Illinois, Advance*, is a very good example of

90c -- Bargains -- 90c

Pick and Choice of a large assortment of
Enameled

DISH PANS

WATER PAILS

TEAKETTLES

STEWERS

COFFEE POTS

Each one a large one and a bargain.
See Our Window

90c MAHONEY HDW. CO. 90c

THE WINCHESTER STORE

price is the one and only feature. The reduction in price in this instance is presumed to be sufficiently attractive to people in constant touch with regular market prices to bring them into the store.

The time limit of such a sale always depends upon the object in view when putting on the sale. If the purpose is to make room for new stock, the sale will run perhaps two or three days, or until the stock on sale is disposed of. On the other

Few strictly hardware stores extend their efforts so far as to include farm machinery in their line. There is, perhaps, no logical reason for this excepting the fact that they never thought of it. The strictly hardware store has ceased to exist. Those who have refused to extend their operations to other lines as well have long since been forced out of business by the competition of drug and chain stores.

The accompanying advertisement,

If You Will Give Us an Opportunity

to quote you prices, we believe we can save you money on purchases of farm machinery.

We handle the Rock Island, Moline, Emerson and Peru Plows.

We have the following special prices on Peru Gangs and Sulkeys.

14," High Life Pace Maker Gang \$100.00

16," High Life Pace Maker Sulkey \$ 70.00

18 x 16 Peru Disc Harrow 9 ft. cut. with tongue truck complete \$ 74.50

Victor Double Fan End Gate Seeder \$ 29.50

3 Section R. Island Wood Lever Harrows . . \$ 42.50

4 Section R. Island Wood Lever Harrow . . . \$ 57.50

We are Head Quarters for the Aermotor Wind-Mills and Pumping Engines.

Christy Hardware Co.

NEW WINDSOR, ILL

how the Christy Hardware Company advertises its farm tool department.

Business Sentiment Improves Gradually, While Sales Resistance Grows Steadily Less.

Buying Slumps In Non-Ferrous Metal Markets—Smelters Refuse to Meet Lower Prices.

FURTHER gradual improvement in the steel and automobile industries is noted in the mid-week reviews, although there is the reminder that August is traditionally the duller month of the year.

"There is general agreement that August brought improvement in the steel trade, whether measured by new buying or by operations at the plants of the leading companies," the *Iron Age* says. "Production is at a somewhat higher rate this week. The Steel Corporation is probably doing better than 55 per cent, while the average for independents is something less. The appearance of demand for rails in company with the promise of car buying is an encouraging factor."

"Under the maintenance of steady though deliberate expansion of the market steel production for the first time in almost three months is again definitely above the 50 per cent mark," the *Iron Trade* says. "The outlook continues to improve and prospects remain better than the actual placing of tonnage. More tonnage is coming from automobile builders and agricultural implement manufacturers are buying more freely."

"The automobile retail sales situation shows distinct improvement," *Automotive Industries* finds. "There continues a better demand from dealers, reflecting a stirring of buying interest on the part of consumers. September, even with fewer working days, may show a stepping up from August production figures, which, in turn, probably will mount somewhat above the July total."

Copper.

The price of copper has sagged from its recent high of 13.75 cents, delivered Connecticut, to 13.50 cents, which price could be done on resale parcels.

Export and domestic inquiry has decreased. Rolling mills and wire mills, however, have good unfilled tonnage on books and are operating at a rate of 55 to 60 per cent as against 45 to 50 per cent a few weeks ago.

Copper wire is quoted 15.62½ cents to 15.75 cents base for bare wire.

Tin.

Tin, after climbing above 53 cents last week, has fallen rapidly the past three market days to about 51 cents. Some buying was done by consumers lately, but in the past few days the market has been dull.

Straits shipments during the first three weeks of August amounted to 5,200 tons and shipments for the entire month are now estimated at 6,250 tons.

Lead.

Lead has held firm though quiet, in the face of slipping prices for other metals. Lead sold August 26 at 8 cents and 8.10 cents, East St. Louis; 8.25 cents and 8.30 cents New York. There has been good buying by all classes of lead users lately.

The lead market was unchanged August 27 at from 8 to 8¼ cents, New York, and from 8 to 8½ cents a pound, St. Louis. The usual spread between these two markets is not in evidence at this time. The leading interest continues to quote 8 cents, New York.

Zinc.

The zinc market moved up to 6.27½ cents, East St. Louis, then reacted on August 25 to 6.22½ cents. A little metal was offered down, but most of the smelters did not follow. The improved galvanizing situation has encouraged the zinc smelters.

Some improvement in domestic demand is reasonably expected after

Labor day, and in the meantime it is not unlikely that a further recession would attract buying by operators who are not disposed to bid at present, for at the price being paid for ore it is cheaper to buy slab than to make it.

Solder.

Chicago warehouse prices on solder are as follows: Warranted, 50-50, \$33.00; Commercial, 45-55, \$32.25, and Plumbers', \$31.00; all per 100 pounds.

Wire and Nails.

Although the past week saw a slight slackening in new bookings of nails and wire this was only by comparison with the preceding week and business in general is better than it had been over several weeks.

Both manufacturers and jobbers are buying wire and demand for nails is widespread.

The market seems to be uniformly on the basis of 2.55 cents, Pittsburgh, for wire, and 2.80 cents, Pittsburgh, for nails, although no formal announcement has been made that prices \$1.00 higher have been abandoned.

Bolts and Nuts.

Although placing of contracts for fourth quarter requirements of bolts, nuts and rivets at Chicago will not start until the middle of September new business and specifications for this class of material are being taken in better volume than for several weeks past. At the same time prices are firmer and less shading is being done.

Tin Plate.

Reports on the corn and tomato crop recently issued by the department of agriculture are favorable toward heavy yields in each case.

While the yield in ton-per-acre shows no increase over last year's crop still more corn and tomatoes

were planted this year than last and it is expected that present estimates of this year's crops will be exceeded.

One large producer of packers' cans in anticipating future requirements has placed additional orders for tin plate which exceeded his third quarter shipment by many thousand base boxes.

The general run of tin plate consumers continue to specify freely and from a general standpoint the demand for this commodity shows a slight improvement.

Prices are firm at \$5.50 per base box of 100 pounds, Pittsburgh. Stock items, classified as "cats and dogs," are quoted as low as \$4.75, while more attractive items are moving out of stock at \$5.25 per base box.

Sheets.

Improvement in the sheet market, which began a few weeks ago, continues to be experienced by producers generally.

While the demand has not been excessive, substantial gains are being made each week and this week is no exception. An increase in demand is apparent from agricultural districts, including Indiana, Illinois, Kansas and Nebraska, where crop conditions have created confidence.

Sales entered last week from rural sections in these states assumed an attractive proportion, one order for blue annealed having exceeded 1,000 tons.

Some western producers are quoting this grade at 2.60 cents, but it has not been necessary for producers in this district to recognize a price lower than 2.70 cents.

Current prices of 3.50 cents for black, 2.70 cents for blue annealed, and 4.60 cents for galvanized are being maintained more firmly by independent producers and it is becoming increasingly difficult to secure tonnage on a lower basis.

The foregoing prices on the various grades of sheets are quoted by the leading interest on all tonnage received up until August 31 for shipment not later than September. An audit of the books of any producer of sheets today will disclose

black sheets being sold from \$3.00 to \$5.00 per ton below costs, according to a well informed source, and how long this situation will continue depends upon bookings.

Old Metals.

Wholesale quotations in the Chicago district, which should be considered as nominal, are as follows: Old steel axles, \$17.50 to \$18.00;

old iron axles, \$24.00 to \$24.50; steel springs, \$18.50 to \$19.00; No. 1 wrought iron, \$14.00 to \$14.50; No. 1 cast, \$16.00 to \$16.50, all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 8 cents; light brass, 5 cents; lead, 5 cents; zinc, 3¼ cents, and cast aluminum, 14½ cents.

Pig Iron Market Stronger—Prices Move Up—Demand Continues for Small Lots.

No. 2 Foundry at \$19.50 to \$20 Pittsburgh—Prices Shaded 50 Cents at Chicago with Inquiry Improved.

THE *Iron Trade Review* makes the following commentary on the pig iron stocks now piled in the yards of makers:

"Statistics and arithmetic are essentials of modern business, but the application of the latter sometimes leads the unwary into curious extravagances and errors, depending upon the point of view that is pursued. Perhaps this has given rise to the old saw that figures are more to be depended upon than those who endeavor to interpret them.

"A case in point is that of pig iron stocks. Rarely have the producers making iron for sale had so much unshipped iron on their yards as at present, this totaling over 1,250,000 tons; certainly, not in the more than five years that complete official statistics have been compiled. Beyond that date there are no dependable figures that permit of comparison. The furnaces have about 800,000 tons of unfilled orders on hand. Therefore, some may say the simple subtraction of sales from stocks gives unsold tonnage, i. e., that pressing the market for an outlet. To express it positively, 800,000 tons of the stock on hand has been sold. But does this follow? Hardly, and certainly not in pig iron. The two figures have not been reduced to a common denominator.

"Most people know that pig iron is sold by grade or analysis and not simply as pig iron. Any individual

furnace would be phenomenally lucky if it could match its stocks against orders subsequently taken. Hence, a considerably less figure than the stocks minus the total orders would represent the iron actually sold. Just what this would be, of course, is beyond practical determination. Furthermore, pig iron orders in great part are for future delivery and hence in many cases against iron not yet made. Meanwhile the stocks must be carried along.

"For the same reason because the steel corporation has 1,000,000 tons of unfilled orders is no assurance it can operate for two months, assuming its capacity to be 500,000 tons monthly. Its order book may not fit its mills. Furthermore, a steel order is not a live one until it is ordered out by the buyer. The same is true of pig iron.

"To declare that so much iron sold on order means that much less unsold tonnage in stock is untrue mathematically and is misleading. So long as the furnaces continue to make as much iron as they ship, it is obvious the total stocks will remain a fixed market factor.

"Shipments, therefore, and not booked orders are the key factor to the market's true position. They alone are the emasculators of stocks. Which is another way of saying that you can't accept all you hear or read and that all pigs are not pigs because they happen to be called such."

Chicago Warehouse Prices on Hardware and Metals.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS

PIG IRON.

Chicago Foundry	.....	\$20 50
Southern Fdy. No. 2	.....	23 51 to 24 01
coal	.....	29 04
Lake Superior Charcoal	.....	29 04
Malleable	.....	20 50

FIRST QUALITY BRIGHT TIN PLATES.

IC	20x28 112 sheets	25 80
IX	20x28	27 25
IXX	20x28 56 sheets	15 35
IXXX	20x28	16 45
IXXXX	20x28	17 55

TERNE PLATES

	Per Box
IC 20x28, 40-lb. 112 sheets	\$25 10
IX 20x28, 40-lb. "	28 00
IC 20x28, 30-lb. "	21 30
IX 20x28, 30-lb. "	24 20
IC 20x28, 25-lb. "	20 30
IX 20x28, 25-lb. "	23 20
IC 20x28, 20-lb. "	17 80
IX 20x28, 20-lb. "	20 65
IC 20x28, 15-lb. "	16 55
IX 20x28, 12-lb. "	15 25
IC 20x28, 8-lb. "	13 55

COKE PLATES.

Cokes, 80 lbs., base, 20x28	\$12 70
Cokes, 90 lbs., base, 20x28	12 95
Cokes, 100 lbs., base, 20x28	13 25
Cokes, 107 lbs., base, IC	
20x28	13 60
Cokes, 135 lbs., base, IX	
20x28	15 40
Cokes, 155 lbs., base, 56 sheets	8 80
Cokes, 175 lbs., base, 56 sheets	9 70
Cokes, 195 lbs., base, 56 sheets	10 65

BLUE ANNEALED SHEETS.

Base 10 ga.	per 100 lbs. 3 30
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ONE PASS COLD ROLLED BLACK.

No. 15-20.	per 100 lbs. \$4 30
No. 22-24.	per 100 lbs. 4 35
No. 26.	per 100 lbs. 4 40
No. 27.	per 100 lbs. 4 45
No. 28.	per 100 lbs. 4 50
No. 29.	per 100 lbs. 4 60

GALVANIZED.

No. 16.	per 100 lbs. \$4 75
No. 18-20.	per 100 lbs. 4 90
No. 22-24.	per 100 lbs. 5 05
No. 26.	per 100 lbs. 5 20
No. 27.	per 100 lbs. 5 35
No. 28.	per 100 lbs. 5 50
No. 30.	per 100 lbs. 6 00

BAR SOLDER.

Warranted.	
50-50.	per 100 lbs. 33 00
Commercial.	
45-55.	per 100 lbs. 32 25
Plumbers.	per 100 lbs. 31 00

ZINC.

In Slabs.	6 75
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SHEET ZINC.

Cask lots, stock, 100 lbs.	11 50
Less than cask lots, 100 lbs.	11 75

BRASS.

Sheets, Chicago base.	18c
Mill Base.	16 1/2c
Tubing, brazed, base.	24 1/2c
Wire, base.	16 1/2c

COPPER.

Sheets, Chicago base.	20 3/4c
Mill base.	19 3/4c
Tubing, seamless, base.	22 1/2c
Wire, No. 9 & 10 B. & S. Ga.	
Wire, No. 11, B. & S. Ga.	17c

LEAD.

American Pig.	9 25
Bar.	10 50
Sheet.	
Full Coils.	per 100 lbs. 12 20
Cut Coils.	per 100 lbs. 12 50

TIN.

Pig Tin.	per 100 lbs. 58 75
Bar Tin.	per 100 lbs. 60 25

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

ADZES.

Coopers'.	
Barton's.	Net
White's.	Net

AMMUNITION.

Shells, Loaded, Peters.	
Loaded with Black Powder 18%	
Loaded with Smokeless Powder.	18%
Winchester.	
Smokeless Repeater	
Grade.	20 & 4%
Smokeless Leader	
Grade.	20 & 4%
Black Powder.	20 & 4%
U. M. C.	
Nitro Club.	20 & 4%
Arrow.	20 & 4%
New Club.	20 & 4%
Gun Wads—per 1000.	
Winchester 7-8 gauge 10&7 1/2	
" 9-10 gauge 10&7 1/4	
" 11-28 gauge 10&7 1/4	

ASBESTOS.

Paper up to 1/16.	6c per lb.
Rollboard.	6 1/2c per lb.
Millboard 3/32 to 1/2.	6c per lb.
Corrugated Paper (250 sq. ft. to roll).	\$6.00 per roll

AUGERS.

Boring Machine.	40&10%
Carpenter's Nut.	50%
Hollow.	
Stearns, No. 4, doz.	\$11 50
Post Hole.	
Iwan's Post Hole and Well 35%	
Vaughan's, 4 to 9 in.	\$15 50

AXES.

First Quality, Single Bitted (unhandled), 3 to 4 lb., per doz.	\$14 00
Good Quality, Single Bitted, same weight, per doz.	13 00

BAR, CROW.

Steel, 4 ft., 10 lb.	\$ 80
Steel, 5 ft., 18 lb.	1 40
Pinch Bars.	
5 1/4 ft., 24 lb.	1 60

BARS, WRECKING.

V. & B. No. 12.	\$0 30
V. & B. No. 24.	0 42
V. & P. No. 324.	0 57
V. & B. No. 30.	0 48
V. & B. No. 330.	0 63

BITS.

All Vaughan and Bushnell.	
Screw Driver, No. 30, each	\$ 30
Screw Driver, No. 1, each	18
Reamer, No. 80, each.	45
Reamer, No. 100, each.	45
Countersink, No. 13, each.	23
Countersink, Nos. 14-15, each	30

BLADES, SAW.

Wood.	
Atkins 30-in.	
Nos.	6 40 26
	\$8 90 \$9 45 \$5 40

BLOCKS.

Wooden.	45%
Patent.	45%

BLOW TORCHES (See Firepots).

BOARDS.

	Per Doz.
Stove.	
Crystal, 33"	\$23 90
Wash.	
No. 760, Banner Globe (single)	per doz. \$5 25
No. 652, Banner Globe (single)	per doz. 6 75
No. 801, Brass King.	per doz. 8 25
No. 860, Single—Plain Pump.	6 25

BOLTS.

Carriage.	
Small, roll thread.	50-10-5%
Small and Large cut thread.	50-5%
Machine.	
Small, roll thread.	60-5%
Small, cut thread.	50-10-5%
Stove.	70-5%

BRACES, RATCHET.

V. & B. No. 444, 8 in.	\$4 54
V. & B. No. 222, 8 in.	3 89
V. & B. No. 111, 8 in.	3 55
V. & B. No. 11, 8 in.	3 02

BRUSHES.

Hot Air Pipe Cleaning.	
Bristle, with handle, each	\$0 85
Flue Cleaning.	
Steel Only, each.	\$1 25

BURRS.

Copper Burrs only.	40-10%
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BUTTS.

Steel, antique copper or dull brass finish—case lots—3 1/2x3 1/4—per dozen pairs	\$3 66
4x4.	4 92
Heavy Bevel steel inside sets, case lots—	
.....per dozen sets	7 80
Steel bit keyed front door sets, each.	1 90
Wrought brass bit keyed front door sets, each.	3 25
Cylinder front door sets, each.	7 50

CEMENT, FURNACE.

American Seal, 5 lb. cans, net	45
" 50-lb. cans, " 90	
" 25 lb. cans, " 2 00	
Asbestos, 5 lb. cans, net.	45
Pecora.	per 100 lbs. 7 51

CHAINS.

1/2 in. proof coil chain, per 100 lbs.	\$3 50
American coil chain.	40 & 10%

CHIMNEY TOPS.

Iwan's Complete Rev. & Vent.	30%
Iwan's Iron Mountain only.	35%
Standard.	30 to 40%

CHISELS.

Cold.	
V. & B. No. 25, 1/2 in., ea.	\$0 26
V. & B. No. 25, 3/4 in., ea.	38
Diamond Point.	
V. & B. No. 55, 1/2 in.	0 33
V. & B. No. 55, 3/4 in.	0 45

Firmer Bevelled.

Round Nose.	
V. & B. No. 65, 1/2 in.	0 33
V. & B. No. 65, 3/4 in.	0 45

Socket Firmer.

Cape.	
V. & B. No. 50, 1/2 in.	0 31
V. & B. No. 50, 3/4 in.	0 62

CHUCKS, DRILL.

Goodell's, for Goodell's Screw Drivers.	List less 35-40%
Yankee, for Yankee Screw Drivers.	\$6 00

CLAMPS.

Adjustable.	
No. 100, Door (Stearns) doz.	\$22 00
Carpenter's.	
Steel Bar. List price plus 20%	

Hose.	
Sherman's brass, 1/2-inch per doz.	\$0 48
Double, brass, 1/2-inch, per doz.	1 20

CLINKER TONGS.

Front Rank, each.	\$1 75
Per doz.	18 00

CLIPS.

Damper.	
Acme, with tail pieces, per doz.	\$1 25
Non Rivet tail pieces, per doz.	35

COPPERS—Soldering.

Pointed Roofing.	
3 lb. and heavier.	per lb. 40c
2 1/2 lb.	" 45c
2 lb.	" 48c
1 1/2 lb.	" 55c
1 lb.	" 60c

CORD.

No. 7 Std. per doz. banks.	\$10 25
No. 8 " " " "	11 75

CORNICE BRAKES.

Chicago Steel Bending.	
Nos. 1 to 6B.	10%

COUPLING HOSE.

Brass.	per doz. \$2 25
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CUT-OFFS.

Kuehn's Korrekt Kutoffs:	
Galv., plain, round or cor. rd.	
Standard gauge.	40%
26 gauge.	10%

DAMPERS.

"Yankee" Hot Air.	
7 inch, each 20c, doz.	\$1 75
8 " " " 25c, " " " " " "	3 40
9 " " " 30c, " " " " " "	2 75
10 " " " 32c, " " " " " "	3 00

Smoke Pipe.	
7 inch, each.	\$ 35
8 " " " " " " " " " "	40
9 " " " " " " " " " "	50
10 " " " " " " " " " "	60
12 " " " " " " " " " "	90

Reversible Check.	
8 inch, each.	\$1 50
9 " " " " " " " " " "	1 70

DIGGERS.

Post Hole.	
Iwan's Split Handle (Eureka)	
4-ft. Handle.	per doz. \$14 00
7-ft. Handle.	per doz. 35 00
Iwan's Hercules pattern, per doz.	14 90

DRILLS.

V. & B. Star, 12-inch Length.	
1/2, 5/16 and 3/8, each.	\$ 27
3/8, each.	38
1, each.	57
1 1/2, each.	65

V. & B. Star, 18-inch Length.	
3/8, each.	\$ 35
1/2, each.	47
1, each.	72
1 1/2, each.	1 10

EAVES TROUGH.

Milcor.	
Galv. Crimpedge, crated.	75-5%

ELBOWS—Conductor Pipe.

Milcor.	
Galv., plain or corrugated, round flat.	
Crimp, Std. gauge.	65%
26 Gauge.	40%
24 Gauge.	10%

Square Corrugated.	
Milcor.	
Standard gauge.	50%
26 gauge.	30%

Portico Elbows.	
Standard Gauge Conductor Pipe, plain or corrugated.	
Not nested.	70 & 5%
Nested solid.	70 & 5%

ELBOWS—Stove Pipe.

1-piece Corrugated. Uniform.	Doz
5-inch.	\$1 40
6-inch.	1 50
7-inch.	2 00

Special Corrugated.

6-inch.	Doz \$1 35
7-inch.	1 65